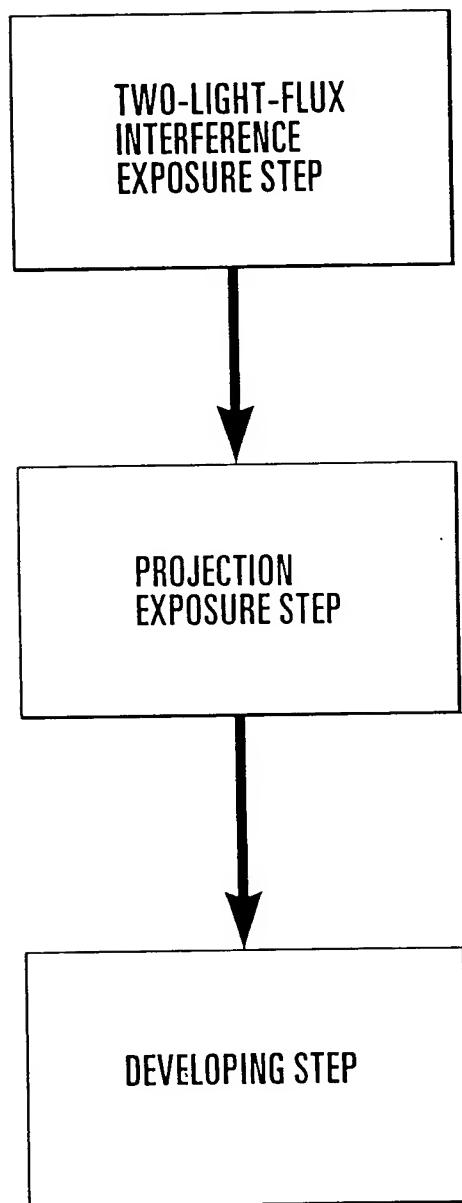
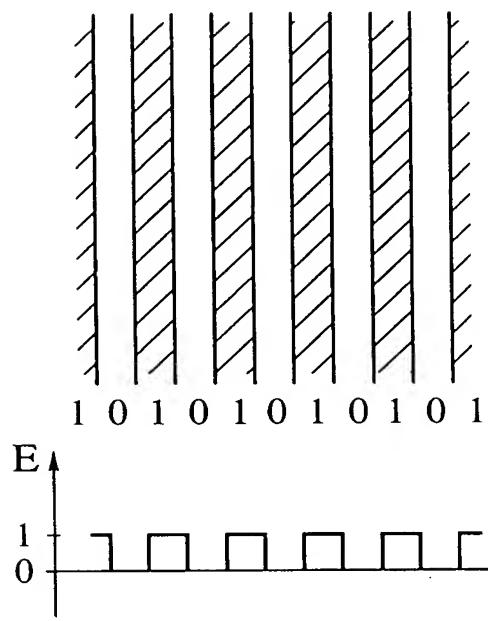


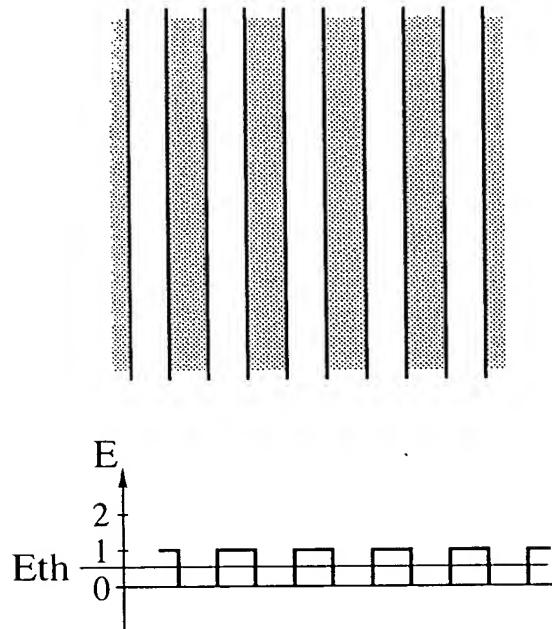
FIG. 1



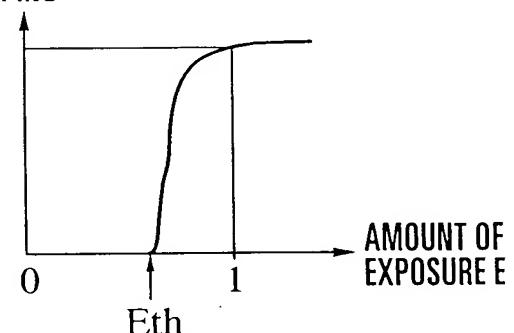
F I G. 2 (A)



F I G. 2 (B)

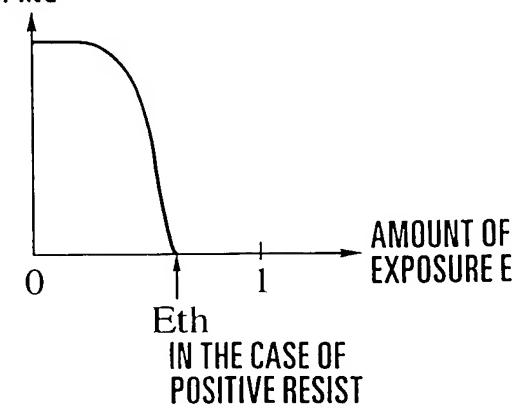


F I L M T H I C K N E S S d
A F T E R D E V E L O P I N G



F I G. 3 (A)

F I L M T H I C K N E S S d
A F T E R D E V E L O P I N G



F I G. 3 (B)

I N T H E C A S E O F
P O S I T I V E R E S I S T

F I G. 4

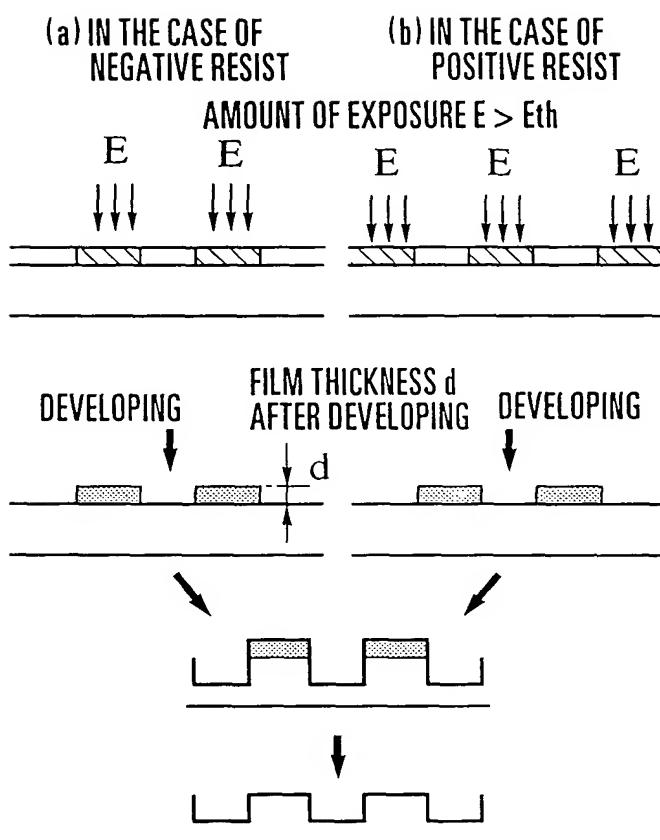
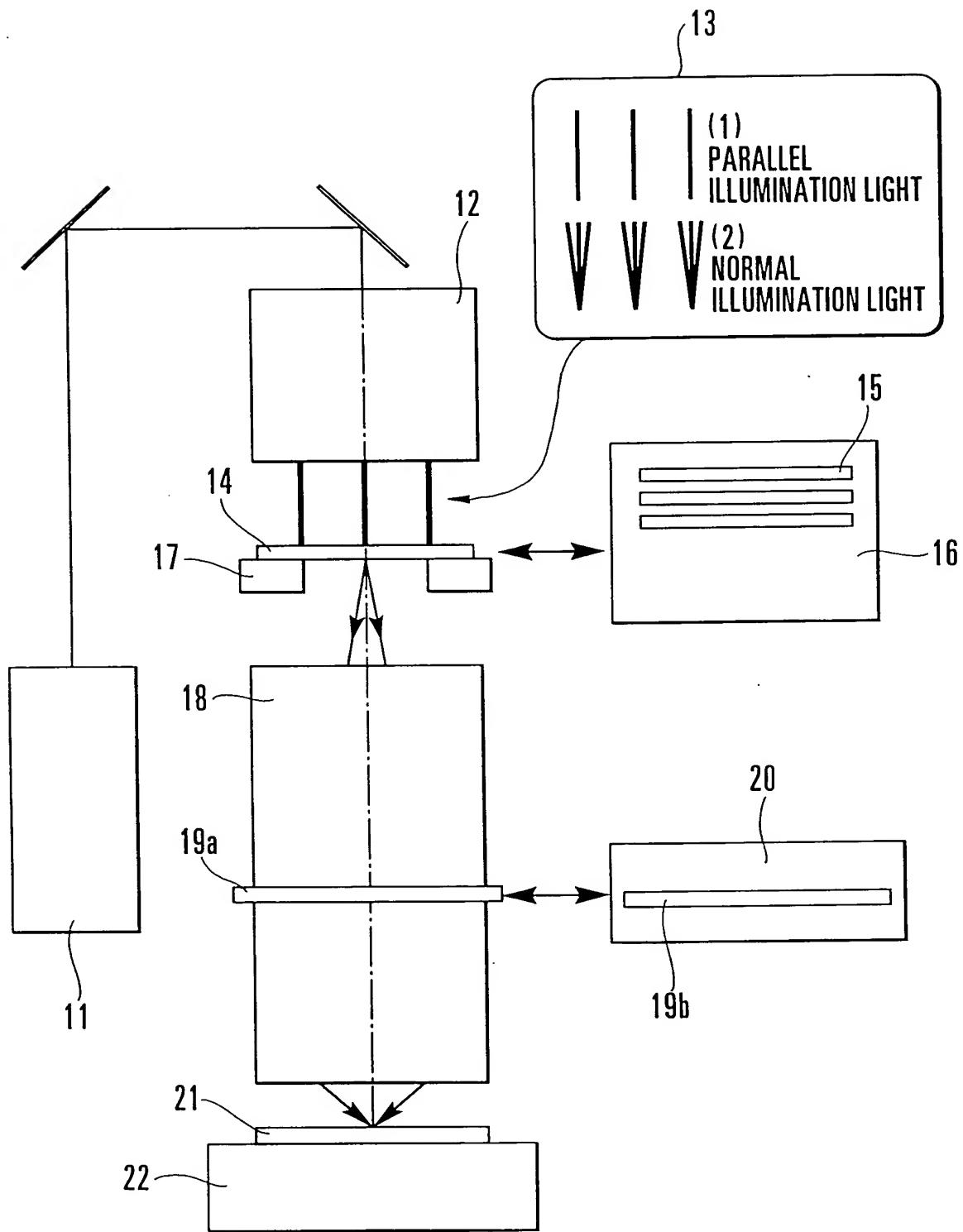
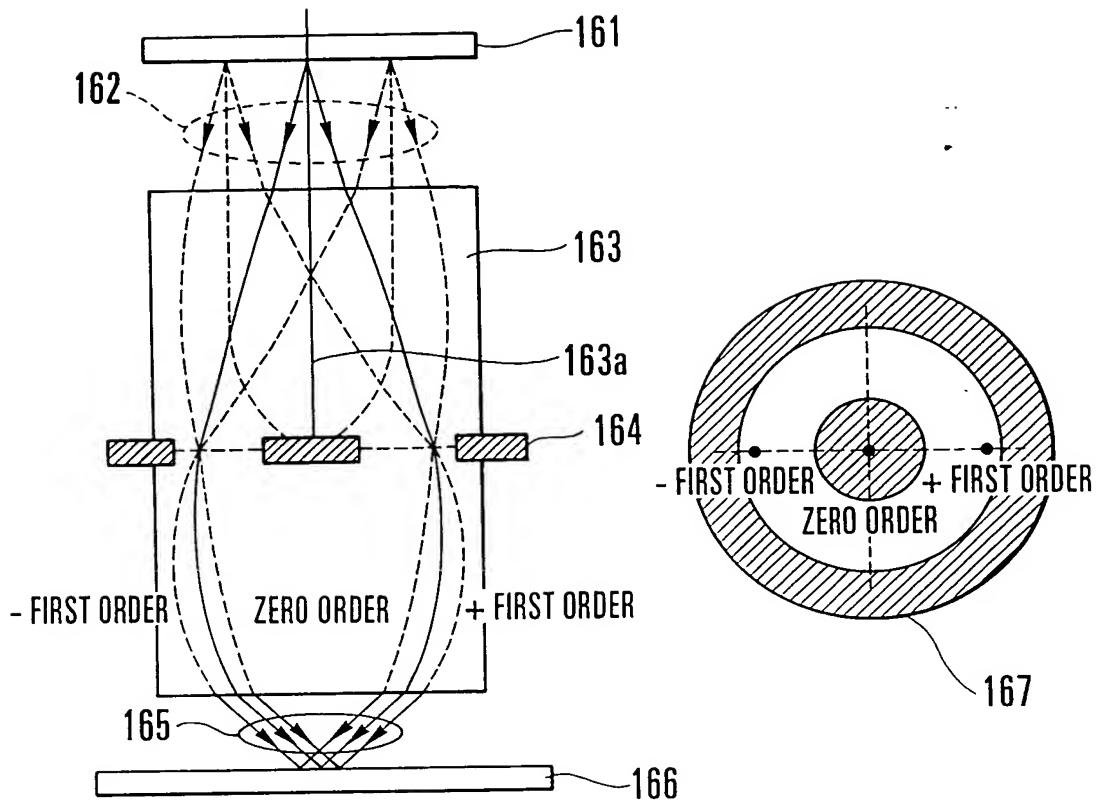


FIG. 5



F I G. 6



F I G. 7

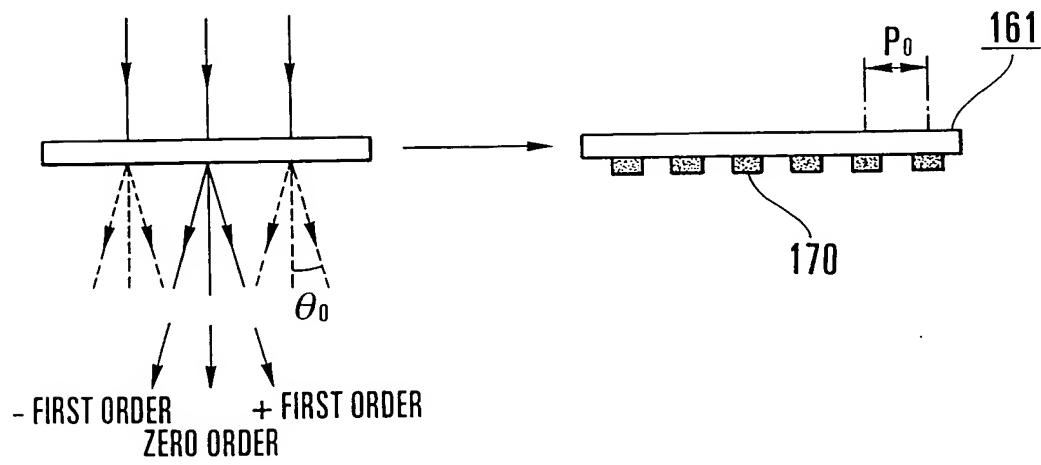


FIG. 8

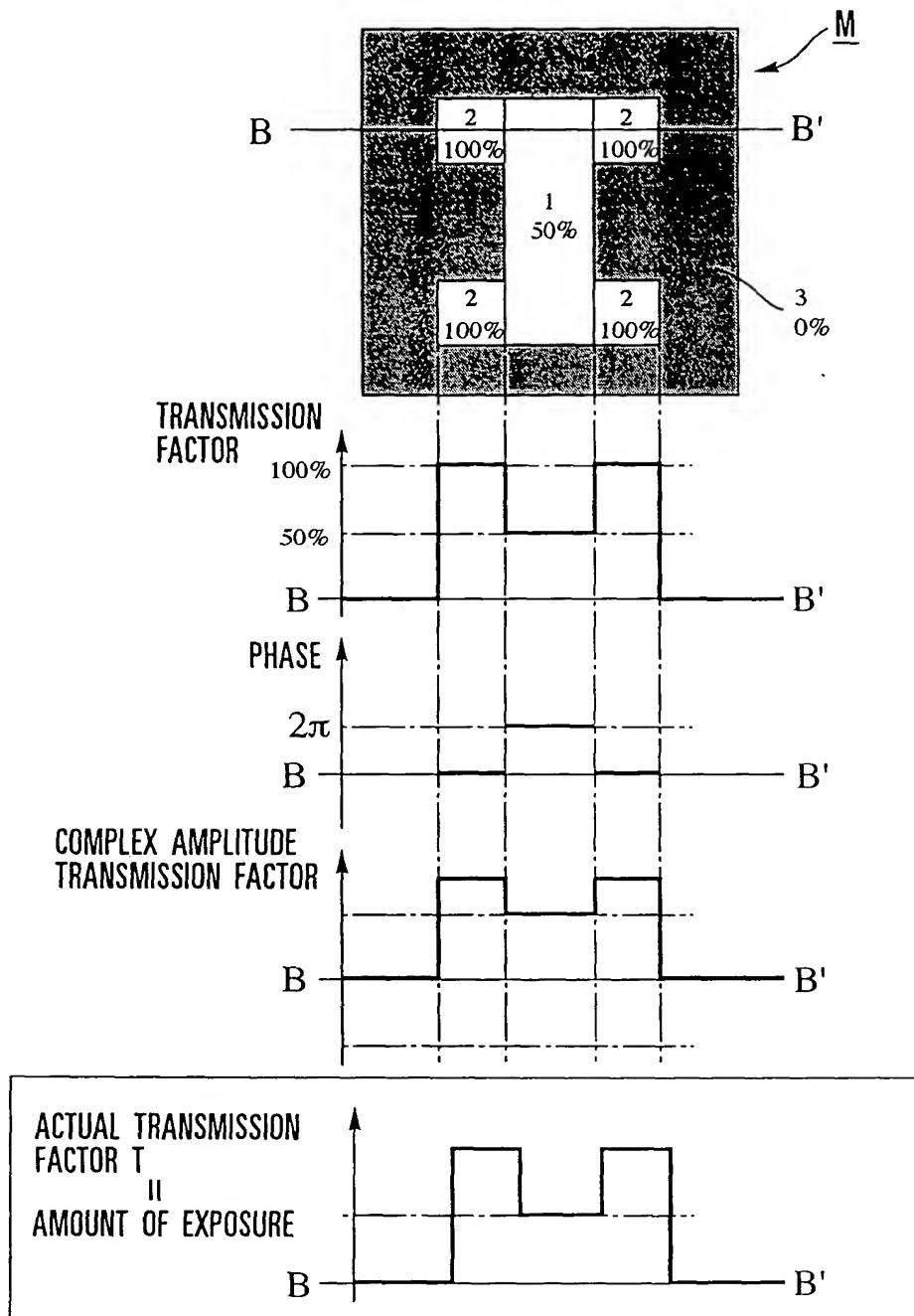
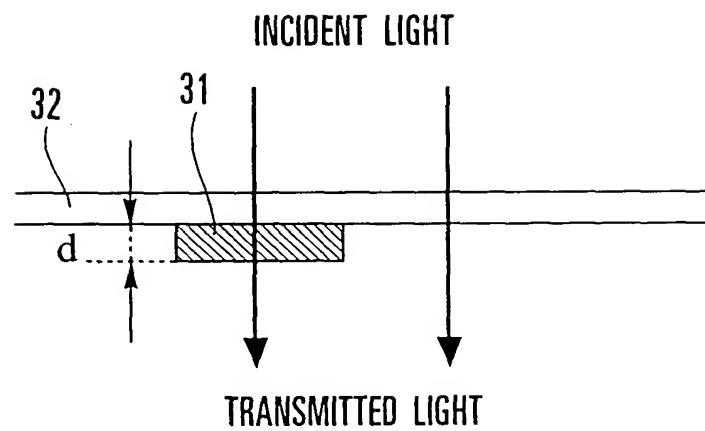


FIG. 9



$$\left\{ \begin{array}{l} T = e^{-cd} \quad \leftarrow \text{TRANSMISSION FACTOR} \\ \theta = 2\pi \frac{nd}{\lambda} \quad \leftarrow \text{PHASE CHANGE} \end{array} \right\} \text{FORMULAS (1)}$$

$$d = \frac{(-\log T)}{c}$$

$$\theta = 2\pi \frac{n(-\log T)}{\lambda c}$$

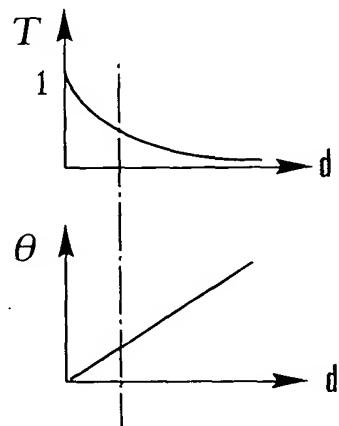
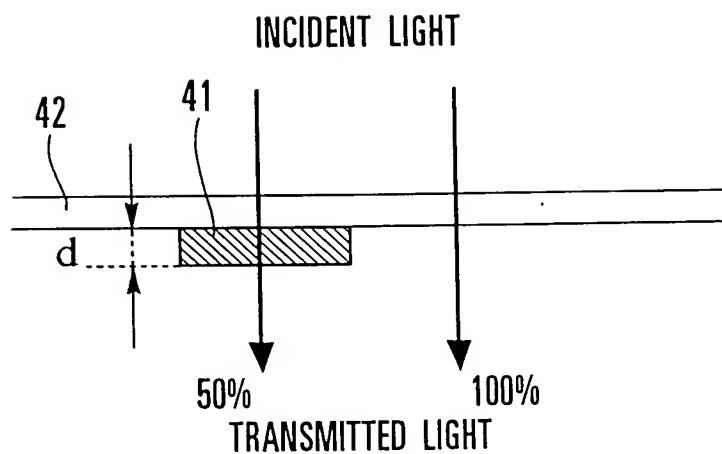


FIG. 10



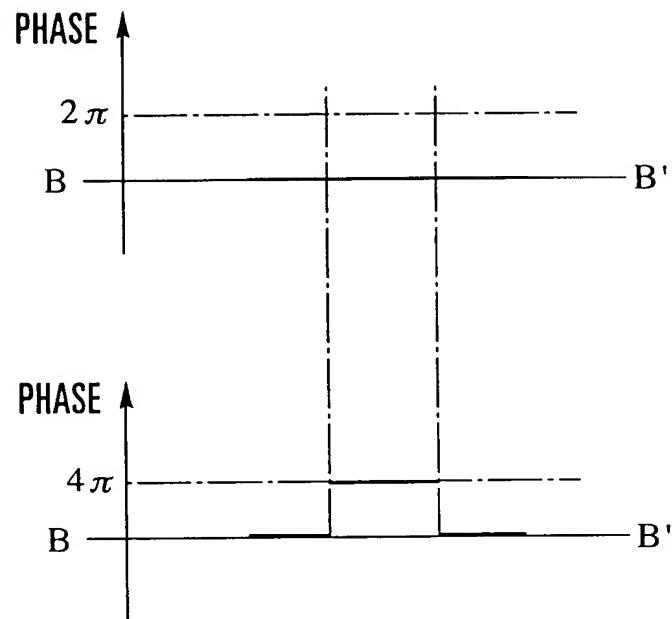
$$\left\{ \begin{array}{l} T = e^{-cd} \quad \leftarrow \text{TRANSMISSION FACTOR} \\ \theta = 2\pi \frac{nd}{\lambda} = 2m\pi \quad \leftarrow \text{PHASE CHANGE} \end{array} \right.$$

$$d = \frac{m\lambda}{n} = \frac{(-\log T)}{c}$$

$$\boxed{\frac{n}{c} = \frac{m\lambda}{(-\log T)}}$$

FORMULAS (2)

F I G. 11



F I G. 12

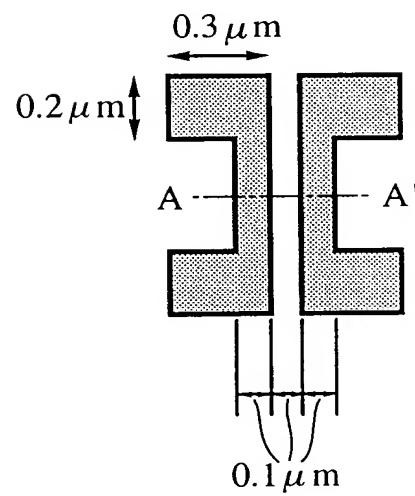
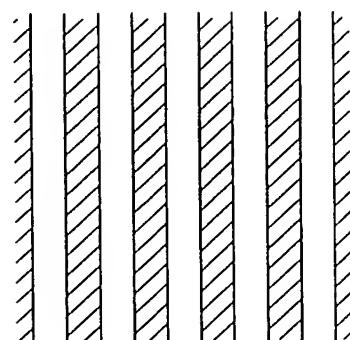
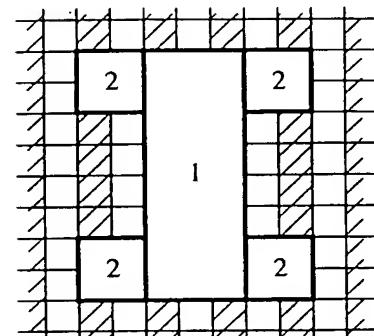


FIG. 13 (A)



1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1
1	0	1	0	1	0	1	0	1	0	1

FIG. 13 (B)



0	0	0	0	0	0	0	0	0	0
0	0	2	2	1	1	1	2	2	0
0	0	2	2	1	1	1	2	2	0
0	0	0	0	1	1	1	0	0	0
0	0	0	0	1	1	1	0	0	0
0	0	0	0	1	1	1	0	0	0
0	0	0	0	1	1	1	0	0	0
0	0	2	2	1	1	1	2	2	0
0	0	2	2	1	1	1	2	2	0
0	0	0	0	0	0	0	0	0	0

FIG. 13 (C)

1	0	1	0	1	0	1	0	1	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	1	0	1	0	1	0	1	0	1

1	0	1	0	1	0	1	0	1	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	1	0	2	1	2	0	1	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	3	2	2	1	2	2	3	0	1
1	0	1	0	1	0	1	0	1	0	1

FIG. 13 (D)

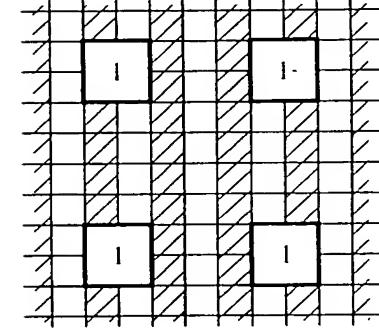
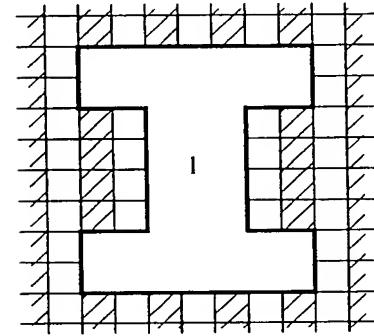
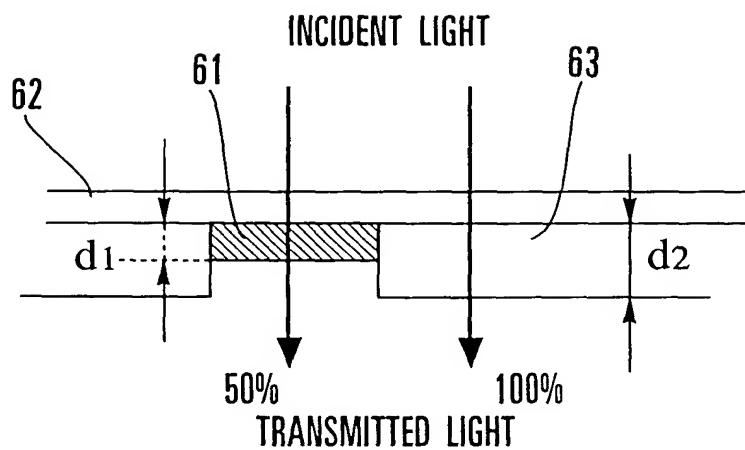


FIG. 14



$$\left\{ \begin{array}{l} T = \frac{e^{-c_1 d_1}}{e^{-c_2 d_2}} \quad \leftarrow \text{TRANSMISSION FACTOR RATIO} \\ \theta = 2\pi \frac{n_1 d_1 - n_2 d_2}{\lambda} = 2m\pi \quad \leftarrow \text{PHASE CHANGE DIFFERENCE} \end{array} \right.$$

FORMULAS (3)

$$c_2 = 0, m = 0$$

$$\boxed{d_1 = \frac{(-\log T)}{c_1}}$$

$$d_2 = \frac{n_1}{n_2} d_1$$

FORMULAS (4)

FIG. 15

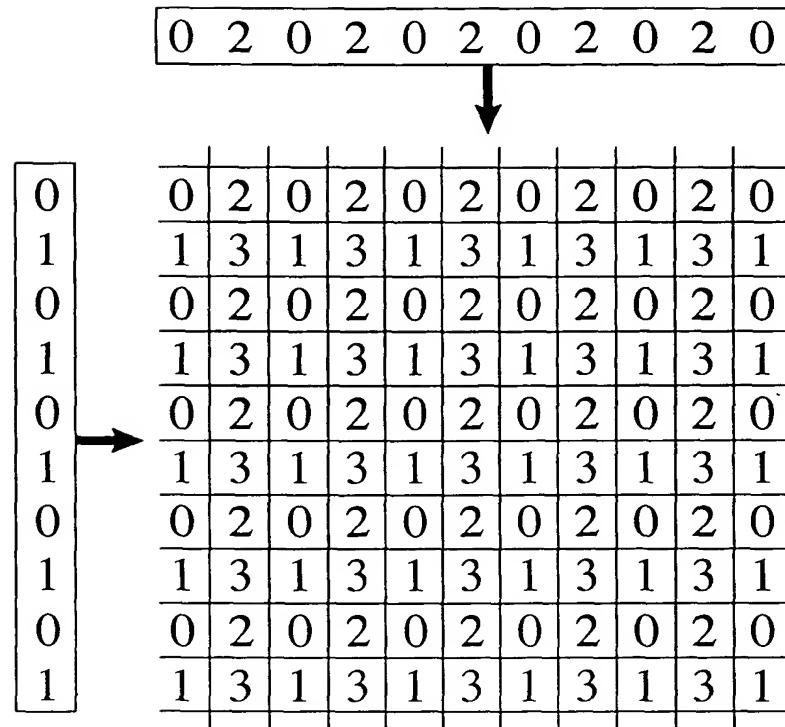
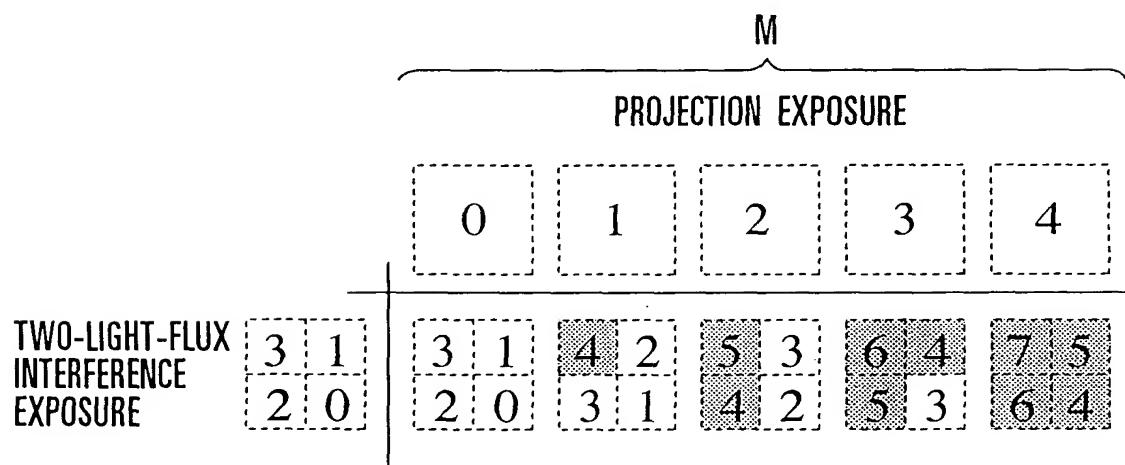


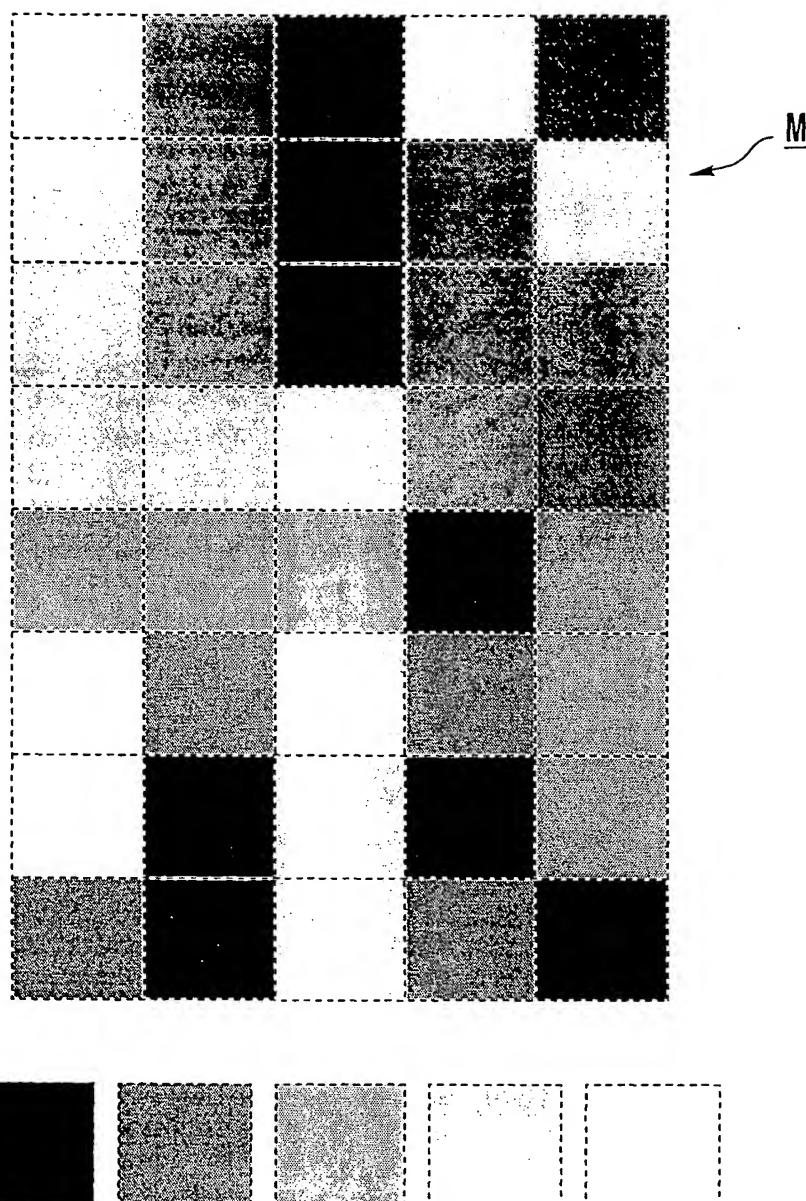
FIG. 16



F I G. 17

3	2	0	3	1
3	2	0	2	3
3	2	0	2	2
3	3	3	2	1
2	2	2	0	2
4	1	3	1	2
4	0	3	0	2
1	0	3	1	0

FIG. 18



AMOUNT OF EXPOSURE	0	1	2	3	4
TRANSMISSION FACTOR	0 %	25 %	50 %	75 %	100 %
PHASE CHANGE	--	6π	4π	2π	0

FIG. 19

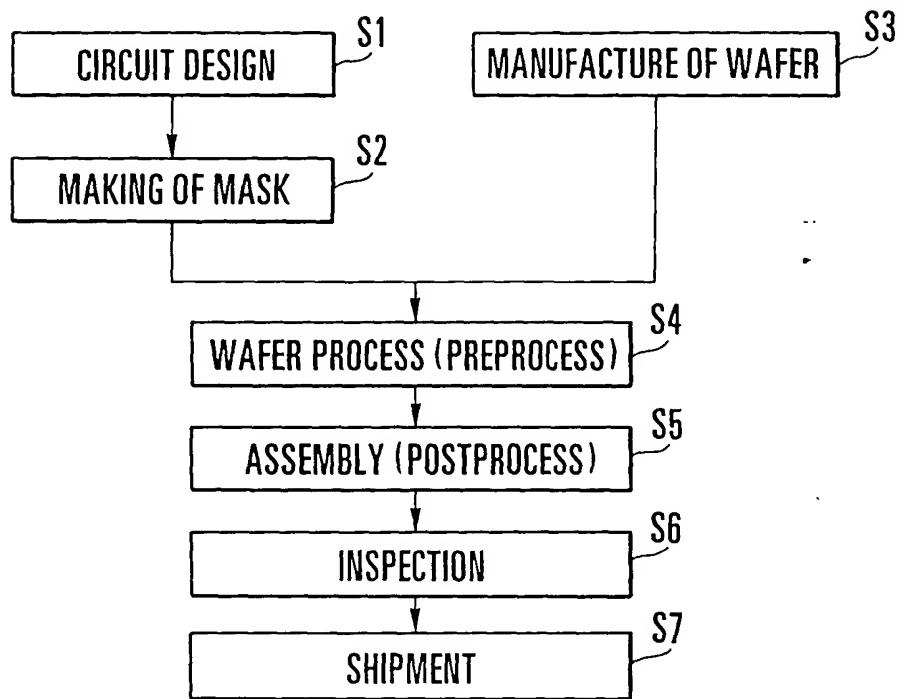
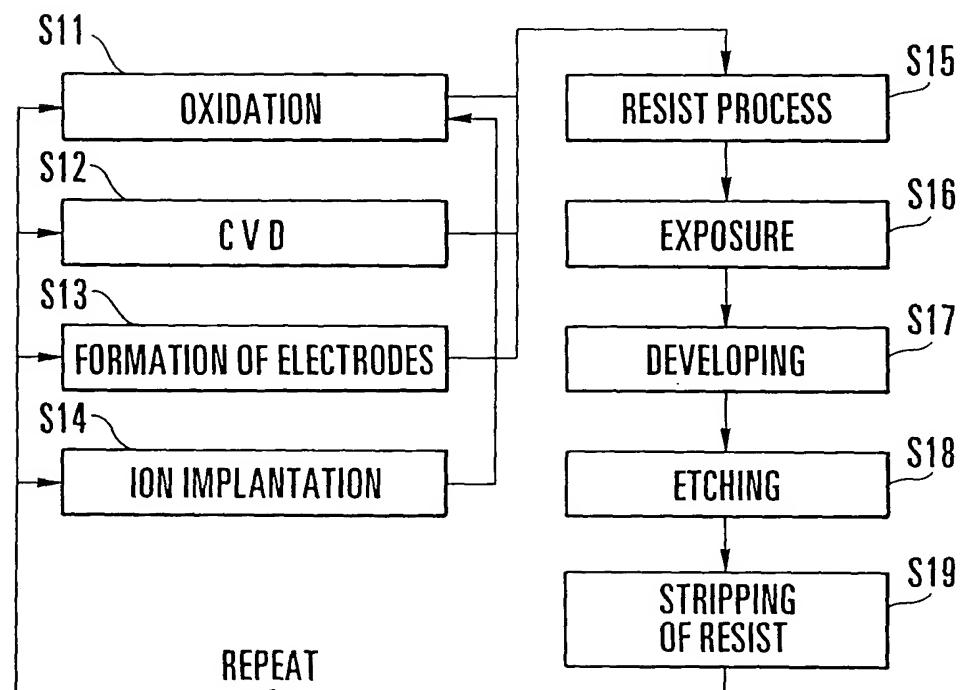
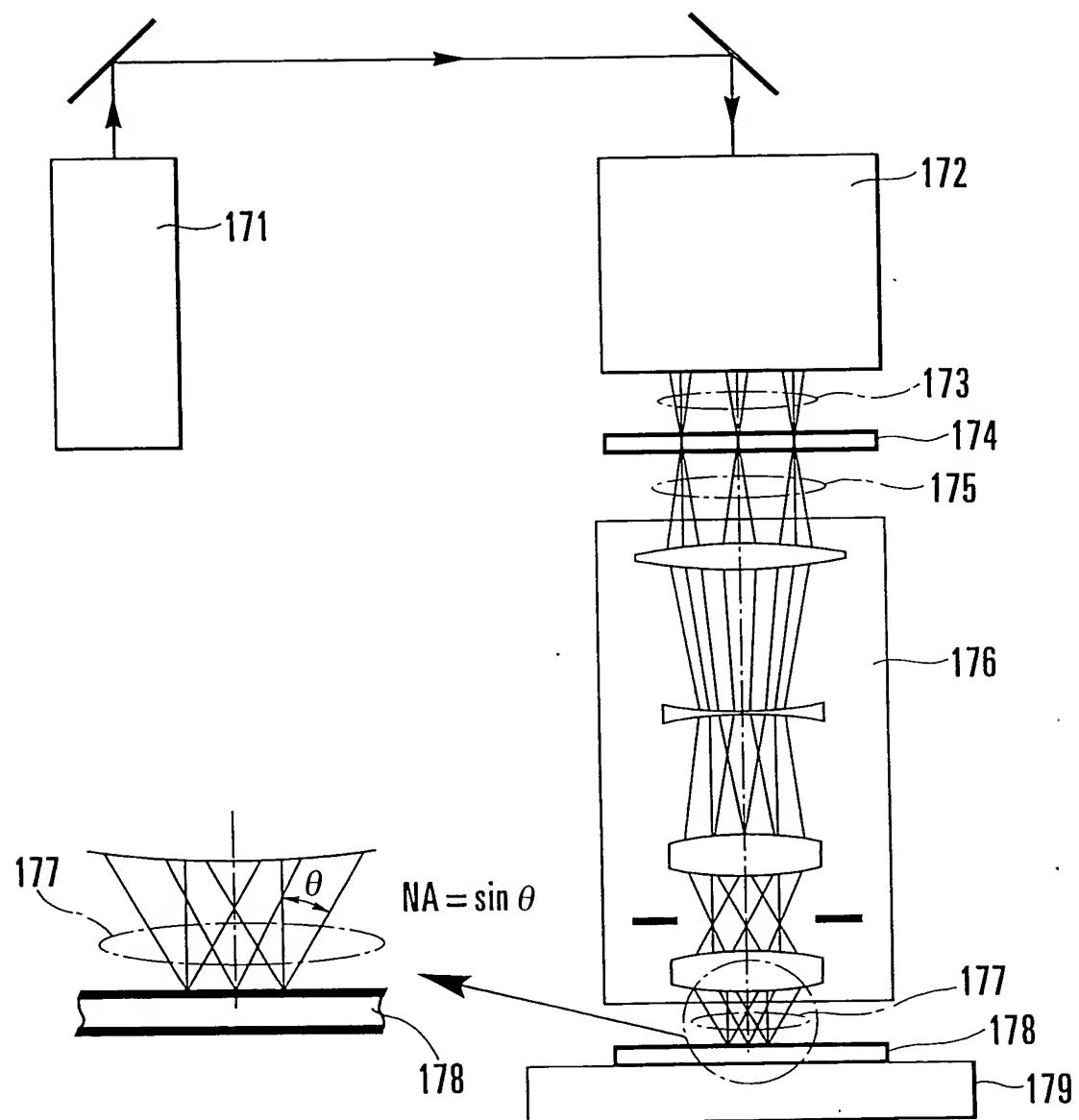


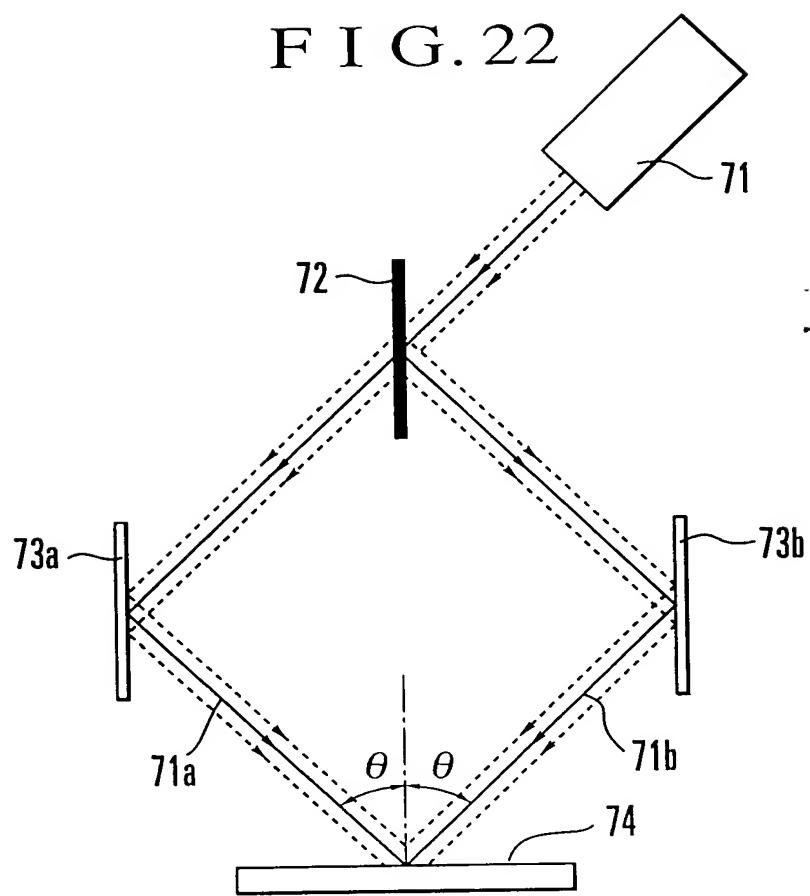
FIG. 20



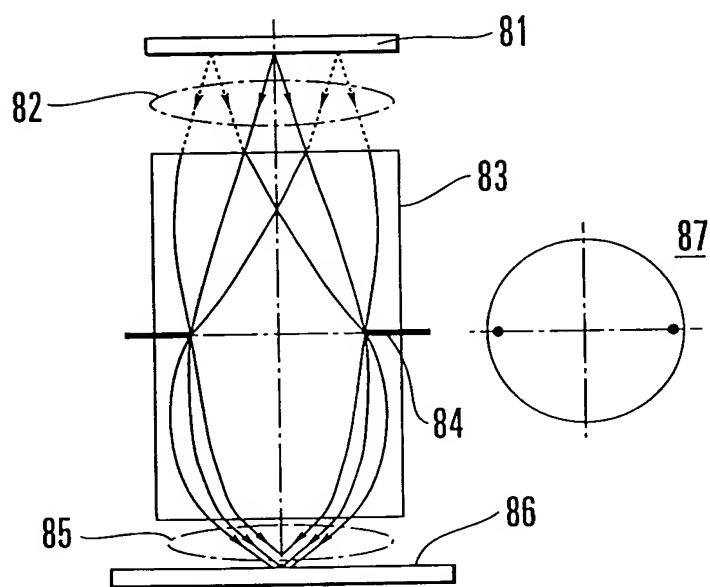
F I G. 21



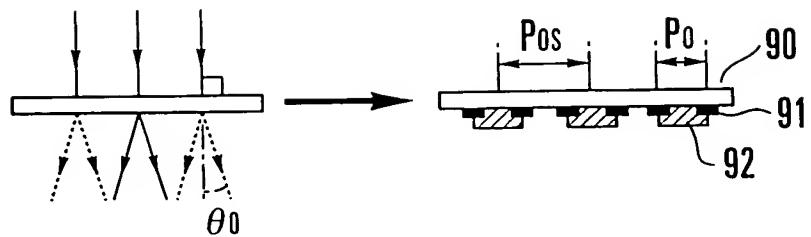
F I G. 22



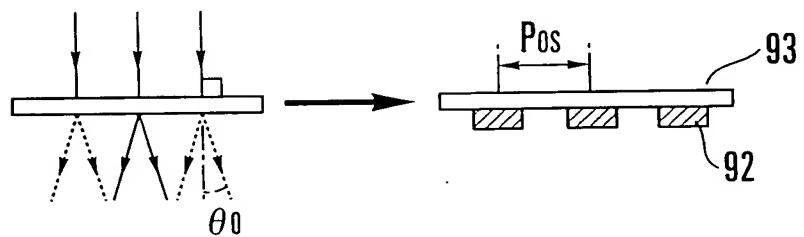
F I G. 23



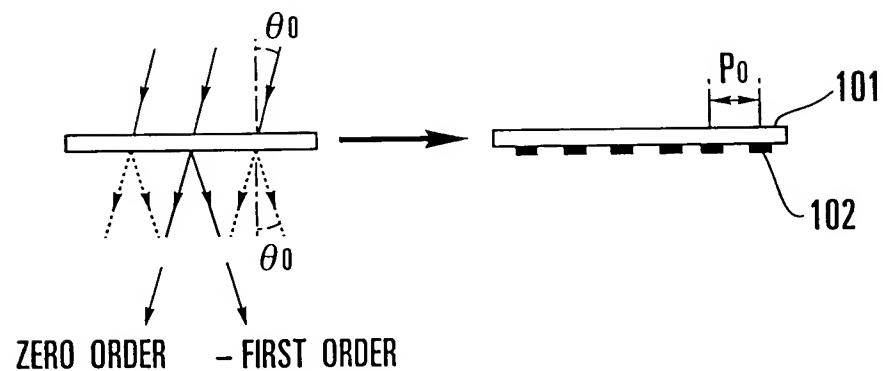
F I G. 24 (A)



F I G. 24 (B)



F I G. 25



F I G. 26

